

WHAT IS CLAIMED IS:

1. A method for reducing the immunosuppressive effects of IL-12 treatment comprising: co-administering with said IL-12, an effective amount of a nitric oxide inhibiting and/or neutralizing agent.
2. The method according to claim 1 wherein said co-administration comprises simultaneously administering said agent with said IL-12.
3. The method according to claim 1 wherein said co-administration comprises sequentially administering said agent, and said IL-12.
4. The method according to claim 3 wherein said co-administration comprises administering said IL-12 before said agent.
5. The method according to claim 1 wherein said agent is an inhibitor of nitric oxide generation is an inhibitor of nitric oxide synthase.
6. The method according to claim 5 wherein said agent is specific for inducible nitric oxide synthase.
7. The method according to claim 5 wherein said inhibitor is selected from the group consisting of L- N^G monomethyl arginine (L-NMMA), L- N^G nitroarginine (L-NORAG), L- N^G nitroarginine methylester (L-NAME), L- N^G nitroarginine p-nitroanilide (L-NAPNA), L- N^G aminoarginine (L-NAA), L- N^G cyclopropylarginine, L- N^G allylarginine, asymmetric L- $N^G N^G$ dimethylarginine (L-ADMA), L- N^{ω} iminoethyl ornithine (L-NIO), 7-nitro indazole (7-NI), 2,7 dinitro indazole, 3-bromo 7-nitro indazole, aminoguanidine, N,N'-diaminoguanidine, dimethylguanidine, diphenyleneiodonium, iodoniumdiphenyl, di-2-thienyliodonium, chlorpromazine, trifluoperazine, pimozide, clozapine, calmidazolium, 2,4 diamino-6-

hydroxypyrimidine, methotrexate, N-acetyl-5-hydroxytryptamine, miconazole, ketoconazole, clotrimazole, imidazole, 1-, 2- and 4-phenylimidazole, methylene blue, NO, carbon monoxide, ebselen, phencyclidine, and antineoplastic agents (doxorubicin, aclarubicin).

8. The method according to claim 7 wherein said agent is L-NAME.

9. The method according to claim 7 wherein said agent is L-NMMA.

10. The method according to claim 1 wherein said agent is a nitric oxide scavenger.

11. The method according to claim 10 wherein said scavenger is selected from the group consisting of N-acetyl cysteine, pyrrolidine dithiocarbamate, and hemoglobin.

12. A method for reducing the toxicity of IL-12 treatment comprising: co-administering with an effective dose of said IL-12, an effective amount of a nitric oxide inhibiting and reducing agent.

13. The method according to claim 12 wherein said co-administration comprises simultaneously administering said agent with said IL-12.

14. The method according to claim 12 wherein said co-administration comprises sequentially administering said agent, and said IL-12.

15. The method according to claim 12 wherein said co-administration comprises administering said IL-12 before said agent.

16. The method according to claim 12 wherein said effective amount of IL-12 is a low dose thereof.

17. The method according to claim 12 wherein said agent is an inhibitor of nitric oxide synthase.

18. The method according to claim 17 wherein said agent is specific for inducible nitric oxide synthase.

19. The method according to claim 17 wherein said inhibitor is selected from the group consisting of L- N^G monomethyl arginine (L-NMMA), L- N^G nitroarginine (L-NORAG), L- N^G nitroarginine methylester (L-NAME), L- N^G nitroarginine p-nitroanilide (L-NAPNA), L- N^G aminoarginine (L-NAA), L- N^G cyclopropylarginine, L- N^G allylarginine, asymmetric L- $N^G N^G$ dimethylarginine (L-ADMA), L- N^G iminoethyl ornithine (L-NIO), 7-nitro indazole (7-NI), 2,7 dinitro indazole, 3-bromo 7-nitro indazole, aminoguanidine, N,N'-diaminoguanidine, dimethylguanidine, diphenyleneiodonium, iodoniumdiphenyl, di-2-thienyliodonium, chlorpromazine, trifluoperazine, pimozide, clozapine, calmidazolium, 2,4 diamino-6-hydroxypyrimidine, methotrexate, N-acetyl-5-hydroxytryptamine, miconazole, ketoconazole, clotrimazole, imidazole, 1-, 2- and 4-phenylimidazole, methylene blue, NO, carbon monoxide, ebselen, phencyclidine, and antineoplastic agents (doxorubicin, aclarubicin).

20. The method according to claim 19 wherein said agent is L-NAME.

21. The method according to claim 19 wherein said agent is L-NMMA.

22. The method according to claim 12 wherein said agent is a nitric oxide scavenger.

23. The method according to claim 22 wherein said scavenger is selected from the group consisting of N-acetyl cysteine, pyrrolidine dithiocarbamate, and hemoglobin.

24. A therapeutic composition comprising IL-12, characterized by reduced toxicity in mammals, said composition comprising an effective dose of said IL-12 and an effective amount of a nitric acid inhibiting and/or neutralizing agent in a pharmaceutically acceptable carrier.